In re Appln. of VERMEERSCH et al.
Application No. 10/811,469

REMARKS

Reconsideration of the application is respectfully requested in view of the following remarks.

Summary of the Application

Claims 1-10 are currently pending in the application.

Summary of the Office Action

The non-final Office Action rejects claims 1-7 and 10 as obvious over EP 0 950 516 A1 to Verschueren et al. ("Verschueren").

With respect to claims 1-3, 5 and 7, the Action asserts that this reference teaches every aspect of the subject matter as claimed, including a compound that increases the dynamic friction coefficient of the top layer. According to the Action, this compound, having a particle size per Verschueren of 0.3 to 50 μm, corresponds to and overlaps the claimed spacer particles which comprise cross-linked polysiloxane and have an average particle size between 0.6 and 15 μm. Because the claimed range overlaps with the ranges disclosed in the prior art, a prima facie case of obviousness is presented which must be rebutted by applicants.

Similarly, the limitation of claim 4 relating to the coating layer thickness (i.e., 0.6 to 2.8 g/m^2 overlaps that disclosed in Verschueren of 0.15 to 20 g/m^2, and thus also renders this claim prima facie obvious over Verschueren. Further, claim 6 is said to be rendered prima facie obvious over Verschueren, the latter disclosing the use of from 20 to 400 mg/m^2 of the compound versus the claimed range of from 5 to 200 mg/m^2.

Claim 7 is alleged to be inherently disclosed by Verschueren. Because a compound used in the top layer of Verschueren contains siloxane units, this compound would inherently act as a claimed developer resistance means.

Claims 8 and 9 are rejected as being obvious over Verschueren in view of applicant's purportedly admitted prior art (page 4, lines 31-33).

Discussion

Verschueren does not render claims 1-7 and 10 obvious. Verschueren is directed to the preparation of a lithographic printing plate with improved vertical transport characteristics. Therefore, Verschueren includes a compound in the top layer that increases the dynamic friction coefficient to between 0.40 and 0.80. To assist in providing this characteristic, Verschueren teaches the use of a number of suitable compounds, namely:

copolymers of polytetrafluoroethylene-polyethylene; water insoluble inorganic compounds having a three-dimensional structure with siloxane bonds extending three-dimensionally and with silicon atoms bonded to one organic group; silica particles; hydrophobic ceramics; barium sulphate and silicone matting particles, with the compounds having a relatively broad average diameter, i.e., from 0.3 to 50 μm.

The present invention is directed toward solving a problem distinct from that addressed by Verschueren—providing a lithographic printing plate precursor with improved scuff-mark resistance, i.e., reducing damage to the surface of the thermal sensitive coating imparted by mechanical action, such as by rubbing. This problem is clearly different than the problem addressed by Verschueren, and underlies the patentable differences associated with the claimed invention.

The present invention provides the aforesaid scuff-mark resistance when a specific type of spacer having a specific average particle size is incorporated into the thermal sensitive coating. The discovery of the advantages in scuff-resistance realized when the aforesaid combination is utilized is unexpected, and not taught or suggested by Verschueren.

Indeed, the unexpected advantages obtained when using the spacer particles of the present invention is demonstrated in Comparative Examples 1-12. Comparative Example 2, which utilizes polysiloxane particles having an average diameter of 0.5 μm, provided poor scuff-resistance (4), as did other materials having average particle sizes ranging from 2.8 to 6.0 (Comparative Examples 3-11). Again, it is only when the combination as claimed (spacer type and average size) is utilized that the desired scuff-resistance is obtained.

Nothing in Verschueren teaches the use of the spacer type and average size recited in the pending claims. To the extent there is any overlap in the average size, the foregoing Comparative Examples demonstrate the unexpected nature of the results—that it is both the material type and size that provide the desired benefit.

Moreover, and assuming Verschueren provides any relevant teaching, one skilled in the art upon testing the material of Verschueren that is closest to the cross-linked polysiloxane used in the present invention (i.e., polysiloxane at a particle size of 0.5 μm—a size within the 0.3-50 μm teaching of Verschueren) would conclude that this material would not provide the desired scuff-resistance. *See, e.g., Comparative Example 2.* The foregoing assumes, of course, that one skilled in the art would have been motivated to undertake such testing by Verschueren alone. Applicants submit that this motivation clearly is absent from Verschueren. Further, one analyzing Verschueren would be led away from the selection of a polysiloxane because Verschueren teaches that TOSPEARL 105, having a particle size of 0.5

μm, is the worst performing material for improving the dynamic friction coefficient. *See Verschueren, Example 6 of Table at [0099].*

The obviousness rejection of claims 8 and 9 fails for the same reasons set forth above, as the secondary reference fails to overcome the deficiencies of Verschueren.
Withdrawal of the obviousness rejections against claims 1-10 is respectfully solicited.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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